- 9. The apparatus of claim 1 further comprising:
- an outlet hole formed in the canister through which a vapor, into which the substance has been vaporized or sublimated, is to be drawn out of chamber body; and
- a carrier gas passage formed in the canister and through which a carrier gas is to be introduced into the chamber body, wherein the carrier gas is to mix with the vapor and be drawn out of the chamber body through the outlet hole.
- 10. The apparatus of claim 9 wherein the outlet hole is formed in the lid.
- 11. An apparatus for vaporization or sublimation of a substance, comprising:
 - a chamber body having a sidewall joined to a bottom, and an open top, the chamber body to hold a substance at the bottom that is to be vaporized or sublimated into a vapor;
 - a plate whose bottom face is to rest on the substance inside the chamber body, the plate having a heater therein that is to release heat directly above the substance that lies below, wherein the plate slides downward as the substance is consumed by vaporization or sublimation;
 - a lid that covers the open top of the chamber body; and a telescoping tube having an inlet connected to a hole in the bottom of the chamber body and through which a carrier gas is to be introduced from outside the chamber body, the telescoping tube having an outlet for the carrier gas that is positioned between the bottom face of the plate and a top surface of the substance inside the chamber body.
 - 12. The apparatus of claim 11 further comprising:
 - a plate guide that extends through a hole formed in the plate and is to guide the plate when the plate slides downward within the chamber body; and
 - an outlet hole formed in the lid, wherein a mixture of the carrier gas and the vapor is to be drawn out of the chamber body through the outlet hole.
- 13. The apparatus of claim 12 wherein the hole in the plate through which the plate guide extends is aligned directly above the hole that is formed in the bottom of the chamber body
 - 14. The apparatus of claim 11 further comprising:
 - inlet tubing located inside the chamber body that is connected to the fluid passage in the plate; and
 - outlet tubing located inside the chamber body that is connected to the fluid passage in the plate, wherein a fluid is to circulate through the inlet tubing, the fluid passage in the plate, and the outlet tubing.
- 15. The apparatus of claim 14 wherein portions of the inlet tubing and the outlet tubing inside the chamber body are wound as spirals, respectively, wherein the inlet and outlet tubing become taller and shorter in a vertical direction as the

- plate remains horizontal while moving downward and upward, respectively, in the chamber body.
- 16. The apparatus of claim 15 wherein the portion of the inlet tubing that is wound as a spiral and the portion of the outlet tubing that is wound as a spiral are interleaved in the vertical direction.
- 17. The apparatus of claim 14 wherein the chamber body has a cylindrical sidewall, and wherein the portions of the inlet and outlet tubings that are wound as spirals, respectively, follow the inner surface of the cylindrical sidewall.
- 18. The apparatus of claim 14 wherein an outermost edge of the plate extends to and is shaped to conform to the inner surface of a sidewall of the chamber body while allowing the plate to slide downward within the chamber body as the substance is vaporized or sublimated.
- 19. The apparatus of claim 14 wherein the temperature of the plate is controlled by the heater, which is one of a resistive heater, radiant heater, an inductive heater, or a thermoelectric heater.
- **20**. An apparatus for vaporization or sublimation of a substance, comprising:
 - a chamber body having a sidewall whose bottom end is joined to a closed bottom, and whose top end defines and an open top, together enclosing a space in which a substance is to be held that is to be vaporized or sublimated into a vapor;
- a plate whose bottom face is to rest on the substance inside the chamber body, the plate having a heater therein that is to release heat directly above the substance that lies below, wherein the plate slides downward as the substance is consumed by vaporization or sublimation, and wherein a groove is formed in the bottom face of the plate and that extends outward from a center region of the plate to an outermost edge region of the plate;
- a lid that covers the open top of the chamber body; and a telescoping tube having an inlet connected to a hole in the bottom of the chamber body and through which a carrier gas is to be introduced from outside the chamber body, the telescoping tube having an outlet for the carrier gas that is positioned between the bottom face of the plate and a top surface of the substance inside the chamber body.
- 21. The apparatus of claim 20 wherein the groove is curved and spirals outward from the center region of the plate to the outermost edge region of the plate.
- 22. The apparatus of claim 20 wherein the groove is curved and spirals outward from the center region of the plate to the outermost edge region of the plate where a mixture of the carrier gas and the vapor escape into the space inside the chamber body that is above the plate.

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